

REMARKS

This application has been carefully reviewed in light of the Office Action of September 06, 2005, wherein:

- A. Claims 1-96 were objected to;
- B. Figure 4 was objected to;
- C. Claims 1-2, 6, 8-10, 14-15, 30-31, 37-38, 43-44, 59-60, 64-65, 68-69 were rejected under 35 U.S.C. 102(b) as being anticipated by Horie et al. (U.S. 5,157,692);
- D. Claims 3, 32, 61, 71, 80-82 and 85-86 were rejected under 35 U.S.C. 103(a) as being unpatentable over Horie et al (U.S. 5,157,692) in view of Spinney (U.S. 5, 390,173);
- E. Claims 6-7 and 35-36 were rejected under 35 U.S.C. 103(a) as being unpatentable over Horie et al (U.S. 5,157,692) in view of Iwamura et al. (U.S. 2002/114286);
- F. Claims 29, 58 and 79 were rejected under 35 U.S.C. 103(a) as being unpatentable over Horie et al (U.S. 5,157,692) in view of Thorson (U.S. 5,533,198); and
- G. Claims 4-5, 11-13, 16-28, 33-34, 39-42, 45-57, 62-63, 66-67, 70, 72-78, 83-84 and 87-96 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

CLAIM OBJECTIONS

- A. Claims 1-96 were objected to.

The Examiner objected to claims 1- 96 because in claim 1, line 16, claim 20, line 3, claim 26, line 5, claim 30, lines 17 and 19, claim 35, line 3, claim 41, line 5, claim 49, line 3, claim 54, line 5, claim 59, lines 17 and 19, and claim 80, lines 21 and 23, "a message may be" should be --the message is--for clarity.

The Applicant believes that the use of "a message may be" in the whereby clause is clear and unambiguous. A search of the patent office database reveals thousands of issued

patents with the terms “may be” in the claims. By way of example, U.S. Patent No. 6,942,475, issued to Ensign et al., discloses:

“An elastic mold for forming a prosthetic component of a prosthetic joint on a patient's bone, said elastic mold comprising:

a main body portion comprising a sidewall, an inner surface and an outer surface, the inner surface and the outer surface defining a thickness of the sidewall therebetween; and

a cavity defined by the sidewall, said sidewall extending around a perimeter of the main body portion, the cavity being formed within the main body portion of the elastic mold, wherein said cavity may be characterized by an open face and configured for receiving an amount of biocompatible material thereinto, said biocompatible material configured for being used as the prosthetic component;

wherein said elastic mold may be configured and dimensioned for being located, in situ, on a portion of the patient's bone; and

wherein said elastic mold may be characterized by the absence of a substantially enclosed casing.”

Because “may be” is a commonly used term in patent claims, and because the Applicant believes that it is clear and unambiguous, the Applicant respectfully requests that the Examiner withdraw this objection.

The Examiner further objected to claims 6, 10, 11, 13, 25, 36, 39, 41, 49-50, 54, 66-67, 76 and 96, stating that the words “may” or “optional” should be removed to recite a definite limitation for clarity. As discussed above, the use of “may” is a commonly used term in patent claims and the Applicant believes that it is clear and does not necessitate removal. Additionally, a search of the patent office database reveals thousands of issued patents with the term “optional” in the claims to define an optional act. By way of example, U.S. Patent No. 6,479,110, issued to Grill et al., discloses:

“A method for fabricating a multiphase low dielectric constant film comprising the steps of:

providing a plasma enhanced chemical vapor deposition (PECVD) chamber,

positioning a substrate in said chamber,
flowing a first precursor gas consisting essentially of Si and at least two elements selected from the group consisting of C, O and H into said PECVD chamber,
flowing at least a second precursor gas consisting essentially of carbon and hydrogen containing molecules, said at least a second precursor gas is **optionally** mixed with an inert carrier gas, and
depositing a multiphase film comprising a first phase consisting essentially of Si, C, O and H and at least a second phase consisting essentially of C, H and a multiplicity of nanometer-sized pores on said substrate, wherein said at least a second phase is dispersed in said first phase and said multiphase film has a dielectric constant of not more than 3.2.”

Because “may” and “optional” are both commonly used terms in patent claims, and because the Applicant believes that the terms are clear and unambiguous, the Applicant respectfully requests that the Examiner withdraw this objection.

The Examiner also stated that claims 5 and 17 were objected to because in claim 5, line 6, claim 17, line 6, “whereby a messages” should be --whereby messages--. The Applicant believes the Examiner misread claim 5. Claim 5 reads “whereby the messages,” and as such, does not necessitate the amendment suggested by the Examiner. Regarding claim 17, the Applicant has amended claim 17 as requested. The Examiner further objected to claim 37, stating that “message to be only” should be --message to be transmitted only--. The pertinent part of claim 37 has been amended to read, “message to be re-transmitted only.” Thus, the Applicant believes these claims are now in allowable condition and respectfully requests that the Examiner withdraw this objection.

These amendments are not made for statutory reasons of patentability and therefore prosecution history estoppel for reasons set forth in the Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd. decisions are not applicable. Therefore, the claims herein should be given the full scope afforded by the judicially created doctrine of equivalents.

DRAWINGS

B. Figure 4 was objected to.

The Examiner objected to figure 4, stating that “-(X+1)” should be --(X+1)-- as noted in claim 16 and in the specification on pages 6 and 15. The Examiner concluded that corrected drawing sheets in compliance with 37 CFR 1.121(d) were required in reply to the Office action to avoid abandonment of the application.

Upon thorough review of figure 4, it was determined that figure 4 is accurate and a typographical error occurred in claim 16 and in the specification on pages 6 and 15. Thus, claim 16 and the relevant sections of the specification have been amended to read, “-(X+1).” Additionally, claims 45, 70, and 89, which include limitations similar to that of claim 16, have also been amended to read, in part, “-(X+1).”

These amendments are not made for statutory reasons of patentability and therefore prosecution history estoppel for reasons set forth in the *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.* decisions are not applicable. Therefore, the claims herein should be given the full scope afforded by the judicially created doctrine of equivalents.

Because the claims and specification are now consistent with figure 4, the Applicant believes that there is no need to provide a drawing correction (as figure 4 is accurate). The Applicant respectfully requests that the Examiner accept the amendments and withdraw this objection of figure 4.

35 U.S.C. §102(b)

C. Claims 1-2, 6, 8-10, 14-15, 30-31, 37-38, 43-44, 59-60, 64-65, 68-69 were rejected under 35 U.S.C. 102(b) as being anticipated by Horie et al. (U.S. 5,157,692, hereinafter referred to as “Horie”).

Claims 1-2, 6, 14-15, 30-31, 43-44, 59-60 and 68-69

Regarding claims 1-2, 6, 14-15, 30-31, 43-44, 59-60 and 68-69, the Examiner stated that Horie discloses a system or a system node having means for performing a method for messaging within several nodes (fig. 3A and 3B) where each node includes a processor, a memory, and a directional communication interface (fig. 3B, item 5; fig. 10, items 9-11; fig. 3A, item 4). The Examiner further stated that the method comprises receiving a message

including an address code (fig. 4, xs, xrcid, ys, yrcid) and corresponding data (fig. 4; bits. 0-15; col. 2, lines 33-41; col. 4, line 63 through col. 5, line 4), where the address code includes a relative target address of the not to which the message is to be sent (fig. 4, xrcid, yrcid), processing the received address code to determine if the code indicates that the current node is the intended recipient of the message (col. 6, lines 21-29), modifying the address code based on the direction from which the message was received, the address code in the message and the direction to which the message is to be retransmitted (col. 6, lines 21-29), retransmitting the message including the modified address code in the direction it is to be transmitted (col. 6, lines 13-17), and repeating the method steps until the message reached the intended node through expiration (col. 6, lines 26-29).

The Examiner misinterprets Horie. Horie discloses a system for controlling communications between a plurality of computer nodes in a fixed grid. (See figure 3A). The nodes in Horie have fixed north, east, south, and west directions, enabling easy increments of X and Y directions. (See Figure 3B). Because of the fixed grid (with fixed north, east, south, and west directions), the Horie invention easily modifies the address code based on the direction of the destination node, NOT based on the direction from which the message was received. As stated clearly, "in a routing of the message in the network, the node number of the destination node counted from the transmission source node is expressed as (+3, +2). Every time the message proceeds one node to the east, namely the x direction, X of the relative number is decremented and when the header flit arrives at the node three nodes east of the transmission source node, the relative node number becomes (0, +2), thereby completing the routing in the x direction. The routing is then conducted in the north south direction, i.e., the y direction, and when the relative node number becomes (0, 0), the routing is complete." (See Horie, col. 5, lines 18-29).

As described above, Horie discloses modifying the address code based on the direction of the destination node. This is done by decrementing the x and y variables as the message passes through the fixed grid, until the relative node number becomes (0, 0). Horie is to be contrasted with the invention of the present application, where the address code is modified based on the direction from which the message was received. In the present application, because the nodes aren't necessarily fixed in a grid, there is not a built-in fixed orientation (i.e., north, east, south, and west). Because there is no fixed grid, the axis is oriented according to the message direction, which causes the address code to be modified

based on the direction the message is coming from. (See the Present Application, fig. 4). In other words, the message is received from a given direction with a given address code represented by (X, Y). The address code is modified such that when it is to be:

- a. transmitted 90 degrees to the left of the direction in which it is received, the modified address code is (Y, -(X+1));
- b. transmitted along the same direction (forward) in which it is received, the modified address code is (X, Y-1); and
- c. transmitted 90 degrees to the right of the direction in which it is received, the modified address code is (-Y, X-1).

As demonstrated, Horie modifies the address code based on the direction of the destination node, and not based on the direction from which the message was received. Because Horie does not teach all of the claimed limitations of claims 1-2, 6, 14-15, 30-31, 43-44, 59-60 and 68-69, the Applicant believes these claims are now in allowable condition. Thus, the Applicant respectfully requests that the Examiner withdraw this rejection.

Claims 8-9, 37-38 and 64-65

Regarding claims 8-9, 37-38 and 64-65, the Examiner stated that Horie discloses that the message is retransmitted in a subset of directions toward the destination depending on the address code and the direction the message was received (col. 6, lines 9-17).

The Applicant refers the Examiner to the above comments regarding claims 1-2, 6, 14-15, 30-31, 43-44, 59-60 and 68-69. Because Horie does not teach all of the claimed limitations of claims 1-2, 6, 14-15, 30-31, 43-44, 59-60 and 68-69, the Applicant believes that claims 8-9, 37-38 and 64-65, which depend therefrom, are also allowable. Thus, the Applicant respectfully requests that the Examiner withdraw this rejection of claims 8-9, 37-38 and 64-65.

Claim 10

Regarding claim 10, the Examiner stated that the recited optional step need not be performed by the method of Horie (MPEP 2106(C), fourth paragraph).

The Applicant refers the Examiner to the above comments regarding claim 1. Because Horie does not teach all of the claimed limitations of claim 1, the Applicant

believes that claim 10, which depends therefrom, is also allowable. Thus, the Applicant respectfully requests that the Examiner withdraw this rejection of claim 10.

35 U.S.C. §103(a)

D. Claims 3, 32, 61, 71, 80-82 and 85-86 were rejected under 35 U.S.C. 103(a) as being unpatentable over Horie in view of Spinney (U.S. 5, 390,173, hereinafter referred to as "Spinney").

Claims 80-81

Regarding claims 80-81, the Examiner stated that Horie discloses a system or a system node having means for performing a method for messaging within several nodes (fig. 3A and 3B) where each node includes a processor, a memory, and a directional communication interface (fig. 3B, item 5; fig. 10, items 9-11; fig. 3A, item 4). The Examiner also stated that the method comprises receiving a message including an address code (fig. 4, xs, xrcid, ys, yrcid) and corresponding data (fig. 4; bits. 0-15; col. 2, lines 33-41; col. 4, line 63 through col. 5, line 4), where the address code includes a relative target address of the node to which the message is to be sent (fig. 4, xrcid, yrcid), processing the received address code to determine if the code indicates that the current node is the intended recipient of the message (col. 6, lines 21-29), modifying the address code based on the direction from which the message was received, the address code in the message and the direction to which the message is to be retransmitted (col. 6, lines 21-29), retransmitting the message including the modified address code in the direction it is to be transmitted (col. 6, lines 13-17), and repeating the method steps until the message reached the intended node through expiration (col. 6, lines 26-29).

However, the Examiner stated that Horie does not disclose that the method is a computer program product recorded on a recording medium. The Examiner also stated that Spinney discloses a routing algorithm embodied on a readable medium (figs. 1A and 2; col. 4, lines 32-35; note: software). Therefore, the Examiner concluded that it would have been obvious to one skilled in the art at the time the invention was made to have a routing algorithm embodied as a computer program on a recordable medium in the invention of Horie in order to provide a flexibly implemented/modified control structure for the method.

The Applicant refers the Examiner to the comments above regarding Claims 1-2, 6, 8-10, 14-15, 30-31, 37-38, 43-44, 59-60, 64-65, 68-69. As discussed above, Horie does not disclose a method for modifying the address code based on the direction from which the message was received. Because neither Horie nor Spinney, either alone or in combination, teach all of the claimed limitations of claims 80 and 81, the Applicant believes that claims 80 and 81 are in allowable condition. Thus, the Applicant respectfully requests that the Examiner withdraw this rejection.

Claims 85 and 86

Regarding claims 85 and 86, the Examiner stated that Horie discloses that the message is retransmitted in a subset of directions toward the destination depending on the address code and the direction the message was received (col. 6, lines 9-17).

The Applicant refers the Examiner to the above comments regarding claims 80 and 81. Because neither Horie nor Spinney, either alone or in combination, teach all of the claimed limitations of claims 80 and 81, the Applicant believes that claims 85 and 86, which depend therefrom, are also in allowable condition. Thus, the Applicant respectfully requests that the Examiner withdraw this rejection of claims 85 and 86.

Claims 3, 32, 61, 71, and 82

Regarding claims 3, 32, 61, 71 and 82, the Examiner stated that Horie discloses a message transmission system (fig. 3A). However, the Examiner stated that Horie does not disclose that the packets contain a time stamp and halting the packet transmission when an amount of time expires. The Examiner also stated that Spinney discloses a time stamp for a packet (fig. 5, item 82; col. 10, lines 51-55; col. 11, lines 9-14) where a packet is discarded if the time stamp expires (col. 5, lines 38-40). Therefore, the Examiner concluded that it would have been obvious to one skilled in the art at the time the invention was made to discard a packet when a time stamp expires in the invention of Horie in order to remove packets from the network that have experienced excess delay (Spinney, col. 11, lines 11-12).

The Applicant refers the Examiner to the above comments regarding claims 1-2, 6, 8-10, 14-15, 30-31, 37-38, 43-44, 59-60, 64-65, 68-69, and claims 80 and 81. Because neither Horie nor Spinney, either alone or in combination, teach all of the claimed limitations of claims 1-2, 6, 8-10, 14-15, 30-31, 37-38, 43-44, 59-60, 64-65, 68-69, and

claims 80 and 81, the Applicant believes that claims 3, 32, 61, 71 and 82, which depend therefrom, are also in allowable condition. Thus, the Applicant respectfully requests that the Examiner withdraw this rejection of claims 3, 32, 61, 71 and 82.

E. Claims 6-7 and 35-36 were rejected under 35 U.S.C. 103(a) as being unpatentable over Horie in view of Iwamura et al. (U.S. 2002/114286, hereinafter referred to as "Iwamura").

Claims 6-7 and 35-36

Regarding claims 6-7 and 35-36, the Examiner stated that Horie discloses a message transmission system (fig. 3A). However, the Examiner stated that Horie does not disclose a message destined for several recipients. The Examiner also stated that Iwamura discloses a network having multicasting (figs. 1 and 31; para. 37; para. 275, lines 16-25; para. 305). Therefore, the Examiner concluded that it would have been obvious to one skilled in the art at the time the invention was made to have several recipients of a message in the invention of Horie in order to efficiently route data to several intended users (Iwamura para. 2, last five lines).

The Applicant refers the Examiner to the above comments regarding claims 1-2, 6, 14-15, 30-31. Because neither Horie nor Iwamura, either alone or in combination, teach all of the claimed limitations of claims 1-2, 6, 14-15, 30-31, the Applicant believes that claims 6-7 and 35-36, which depend therefrom, are also allowable. Thus, the Applicant respectfully requests that the Examiner withdraw this rejection of claims 6-7 and 35-36.

F. Claims 29, 58 and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horie et al (U.S. 5,157,692) in view of Thorson (U.S. 5,533,198, hereinafter referred to as "Thorson").

Claims 29, 58, and 79

Regarding claims 29, 58 and 79, the Examiner stated that Horie discloses a message transmission system (fig. 3A). However, the Examiner stated that Horie does not disclose three-dimensional routing. The Examiner further stated that Thorson discloses three-dimensional routing (figs. 3, 5 and 7). Therefore, the Examiner concluded it would have

been obvious to one skilled in the art at the time the invention was made to have three-dimensional routing in the invention of Horie in order to provide an efficient network topology for routing (Thorson, col. 1, lines 33-49).

The Applicant refers the Examiner to the above comments regarding claims 1-2, 6, 8-10, 14-15, 30-31, 37-38, 43-44, 59-60, 64-65, 68-69. Because neither Horie nor Thorson, either alone or in combination, teach all of the claimed limitations of claims 1-2, 6, 8-10, 14-15, 30-31, 37-38, 43-44, 59-60, 64-65, 68-69, the Applicant believes that claims 29, 58, and 79, which depend therefrom, are also allowable. Thus, the Applicant respectfully requests that the Examiner withdraw this rejection of claims 29, 58, and 79.

ALLOWABLE SUBJECT MATTER

G. Claims 4-5, 11-13, 16-28, 33-34, 39-42, 45-57, 62-63, 66-67, 70, 72-78, 83-84 and 87-96 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

The Examiner stated that claims 4-5, 11-13, 16-28, 33-34, 39-42, 45-57, 62-63, 66-67, 70, 72-78, 83-84 and 87-96 were objected to as being dependent upon a rejected base claim. However, the Examiner stated that they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, and rewritten to overcome any claim objections noted above.

The Applicant refers the Examiner to the above comments regarding claims 1-2, 6, 8-10, 14-15, 30-31, 37-38, 43-44, 59-60, 64-65, 68-69, and 80-81. Because claims 1-2, 6, 8-10, 14-15, 30-31, 37-38, 43-44, 59-60, 64-65, 68-69, and 80-81 are believed to be in allowable condition, the Applicant believes that claims 4-5, 11-13, 16-28, 33-34, 39-42, 45-57, 62-63, 66-67, 70, 72-78, 83-84 and 87-96, which depend therefrom, are also in allowable condition. Thus, the Applicant respectfully requests that the Examiner provide timely allowance of all pending claims.

5 **Concluding Remarks:**

The Applicant respectfully submits that in light of the above comments and remarks, the claims are now in allowable condition. The Applicant thus respectfully requests timely allowance of the pending claims.

10 In the event the Examiner wishes to discuss any aspect of this response, or believes that a conversation with either Applicants or Applicants' representative would be beneficial the Examiner is encouraged to contact the undersigned at the telephone number indicated below.

15 The Commissioner is authorized to charge any additional fees which may be required or credit overpayment to deposit account no. 50-2691. In particular, if this response is not timely filed, the Commissioner is authorized to treat this response as including a petition to extend the time period pursuant to 37 CFR 1.136(a) requesting an extension of time of the number of months necessary to make this response timely filed. The petition fee due
20 in connection therewith may be charged to deposit account no. 50-2691.

Respectfully submitted,



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